"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

UDC 612+616-092"7"-51"(047)

USSR

Doskin, V. A., and LAVRENT'YEVA, N. A., Hygiene Department, Central Scientific Research Laboratory, Chair of Hygiene of Children and Adolescents, First Moscow Medical Institute imeni I. M. Sechenov

"Diurnal Rhythms and Thier Role in Human Physiology and Pathology"

Moscow, Sovetskaya Meditsina, No 4, 1971, pp 67-70

Abstract: Seventy-seven sources dealing with desynchronosis and with diurnal human physiological cycles and their effects on medical phenomena are reviewed. Physiological studies cited deal with the time of maximum physiological activity, external factors (day-night cycle, biological, social) regulating diurnal rhythms, maintenance of diurnal rhythms in the absence of external stimuli, and normal physiological changes occurring over a 24-hour period (cardiovascular, hematological, hormonal, central nervous, respiratory, and urinary). Medical phenomena affected by the diurnal rhythm include parturition, would healing, drug effectiveness, and diseases such as stenocardia, hypertonic illness, bronchial asthma, thrombosis, and myocardial infraction. Human working performance is also affected by time of day. Sometimes changes in physiological rhythms can be used to dagnose particular diseases, and as indicators of disease treatment effectiveness. Articles on the pathological and physiological effects of desynchronosis are cited.

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UDC 615.285.7.099

USSR

LAVRENT'YEVA, N. A., Chair of Food Hygiene, First Moscow Medical Institute

"Biological Effects of the Herbicide Phenazone"

Moscow, Voprosy Pitaniya, No 5, 1970, pp 74-78

Abstract: Phenazone (1-phenyl-4-amino-5-chloropridazone-6), a promising new herbicide, is recommended for application to soil used to grow fodder and various kinds of beets. It possesses a low toxicity, the LD_{50} for rats and mice being 2.4 g/kg and 1 g/kg, respectively. Nevertheless, in both short- and long-term experiments on rats and mice which received 1/10 to 1/50 LD_{50} of phenazone, significant shifts were noted in their energy metabolism, including an increase in the content of inorganic phosphate and a marked decrease in adenosinetriphosphate. In another series of experiments, large doses (0.1 mg) injected into the yolk sacs of chick embryos altered the nucleic acid content of the liver, inhibited embryonal development, and produced a high mortality. The doses used in the experiments were higher than the residual amount of the fungicide found in beets grown on soil treated with it (0.2 mg/kg) at the recommended rate (4 kg/ha). Rats fed such beets for 6-1/2 to 7 months did not exhibit the biochemical changes mentioned above.

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1/2 019 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--PHARMACOLOGICAL CHARACTERIZATION OF SOME MUSCLES IN ANNELIDS AND SIPUNCULIDS -U-

AUTHOR-(04)-GER, B.A., DARDYMOV, I.V., LAVRENTYEVA, V.F., NIKHELSON, M.YA.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL EVOLYUTSIONNOY BIOKHIMII I FIZIOLOGII, 1970, VOL 6, NR 2, PP 187-197

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--WORM, MUSCLE PHYSIOLOGY, ACETYLCHOLINE, CHOLINESTERASE, CHOLINOLYTIC

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3005/0356 STEP NO--UR/0385/70/006/002/0187/0197

CIRC ACCESSION NO--AP0132587

UNCLASSIFIED

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UNCLASSIFIED PROCESSING DATE--13NOV70

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CIRC ACCESSION NO--AP0132587

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDIES HAVE BEEN MADE ON THE CHOLINORECEPTION IN THE PROBOSCIS RETRACTOR OF THE SIPUNCULID PHYSCOSOMA JAPONICUM AND IN BODY WALL MUSCLES OF TWO ANNELIDS, LUMBRICONEREIS IMPATIENT AND SERPULA VERMICULARIS. THE RESULTS WERE COMPARED WITH THOSE OBTAINED ON MUSCLES OF TWO OTHER ANNELIDS, HIRUDO MEDICINALIS AND ALLOLOBOPHORA LONGA. ALL THESE MUSCLES EXHIBIT COMPARATIVELY HIGH SENSITIVITY TO ACETYLCHOLINE PROVIDED THEIR CHOLINESTERASES ARE INHIBITED. CHOLINORECEPTORS OF THE MUSCLES EXAMINED ARE PREDOMINANTLY OF THE NICOTINIC TYPE. HOWEVER THE CLASSIFICATION OF CHOLINORECEPTORS AS MUSCARINIC AND NICOTINIC ONES WHICH IS ACCEPTED FOR VERTEBRATES, CANNOT BE FULLY APPLIED TO INVERTEBRATES. SIMILARLY, CLASSIFICATION OF CHOLINESTERASES AS ACETYLCHOLINESTERASE AND BUTYRYLCHOLINESTERASE DOES NOT EMBRACE ALL THE VARIETY OF INVERTEBRATE CHOLINESTERASES. SOME SIGNS OF OLIGOMERIC STRUCTURE IN THE CHOLINORECEPTORS WERE DISCOVERED IN THE MUSCLES STUDIED. EVIDENT SIGNS OF C-16 STRUCTURE WERE FOUND IN A. LONGA AND S. VERMICULARIS. C-10 STRUCTURE WAS OBSERVED ONLY IN A. LONGA. CHOLINOLYTIC AGENTS WITH TERTIARY NITROGEN INDUCE PERIODIC ACTIVITY IN THE PROBOSCIS RETRACTORS OF PHYSCOSOMA, WHICH RESULTS PRESUMABLY FROM THE EFFECT OF THESE AGENTS ON THE NERVOUS ELEMENTS OF THESE MUSCLES. FACILITY: INSTITUTE OF EVOLUTIONARY PHYSIOLOGY AND BIOCHEMISTRY, USSR ACADEMY OF SCIENCES, LENINGRAD.

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USSR

VAVILIN, G. I., VASIL'YEV, A. V., IL'INA, T. B., KROPACHEV, V. A., LAVRENT'YEVA, Ye. M., RABINOVICH, I. M., and TRUKHMANOVA, L. B., Institute of High-Molecular Compounds, Academy of Sciences USSR; State Scientific Research Institute of Tuberculosis, Ministry of Health of RSFSR; Leningrad Scientific Research Institute of Antibiotics, Ministry of Medical Industry USSR

"Use of Polymers for Modification of Antibacterial Preparations"

Riga, Fiziologicheski i Opticheski Aktivnyy Polimernyye Veshchestva, "Zinatne," 1971, pp 175-180

Abstract: Antibacterial preparations were modified by forming strong chemical bonds with polymers, and by protective coatings. Mixtures of p-aminosalicylic acid (PASA), streptomycin and hydrazine of isonicotinic acid (HINA) with polyvinyl alcohol (PVA) and polyvinylpyrrolidone (PVP), gels of iodopolyvinyl alcohol, as well as polymer preparations with PASA and HINA were studied. Coating of streptomycin, PASA, and HINA were accomplished with acetylphthalylcellulose (APC) and with its ammonium salt (NH_4-APC). All prepared antitubercular preparations preserved their potency in vitro for not less than 1 year. Therapeutic properties of PASA, tubasida, and streptomycin with polymers were tested on dogs and guinea pigs. The long-lasting effect of preparations depended first of all on the polymer-carrier, its mol. wt.,

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USSR

VAVILIN, G. I., et al., Fiziologicheski i Opticheski Aktivnyye Polimernyye Veshchestva, "Zinatne," 1971, pp 175-180

and the method of administration into the animal organism. Best results were shown by polymers with mol. wt. of 50,000-60,000. Coating of tubaside, PASA, and streptomycin with APC and NH_4-APC eliminated some side effects, excessive production of gastric juices, increased tolerance by patients who could not take them without coatings, and prolonged effectiveness of all drugs tested. PASA pills with APC coating preserved their antimicrobial effect for 2 years (1.5 years for uncoated pills). Solubility of APC and NH_4-APC coatings in artificial gastric juices at pH 7.4 was 20 and 15 min, respectively, and 3 hr at pH 1.2. Some coated pills reached small intestine before being completely decomposed. NH_4-APC coatings were more penetrable by fluids than APC coatings.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

UNCLASSIFIED PROCESSING DATE--02OCT70

1/2 012

TITLE--THE SYNDROME OF FALSE RECOGNITION IN SCHIZOPHRENIA -U-

AUTHOR--LAVRETSKAYA, E.F.

COUNTRY OF INFO--USSR

SOURCE--ZHURNAL NEVROPATOLOGII I PSIKHIATRII IMENI S. S. KORSAKOVA, 1970, VOL 70, NR 4, PP 560-564

DATE PUBLISHED-------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SCHIZOPHRENIA, HALLUCINATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

STEP NO--UR/0246/70/070/004/0560/0564

PROXY REEL/FRAME--1988/1671

CIRC ACCESSION NO--AP0106417

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

UNCLASSIFIED PROCESSING DATE--020CT70

2/2 012

CIRC ACCESSION NO--AP0106417

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE REPORT CONCERNS A STUDY OF 93 PATIENTS WITH PERIODICAL AND SHIFT LIKE PARANOID SCHIZOPHRENIA WITH A SYNDROME OF FALSE RECOGNITION. THE AUTHOR COMES TO THE CONCLUSION THAT THIS SYNDROME IS NOT EXHAUSTED BY THE DESCRIBED IN LITERATURE 4 VARIETIES OF IT: DELUSIONS OF A POSITIVE DOUBLE, DELUSIONS OF A NEGATIVE DOUBLE, DELUSIONS OF INTERMETAMORPHOSE AND FREGOLI'S SYMPTOM. THE AUTHOR DESCRIBES THE SYMPTOMS OF THE DEAD AND MONSTERS, STANDING CLOSE TO THE SYMPTOM OF A POSITIVE DOUBLE, BUT HAVING THEIR OWN TRAITS BY CONDITIONS OF APPEARANCE AND BY THEIR CLINICAL PICTURE. IN SOME CASES THE SYMPTOMS OF FALSE RECOGNITION ARE ILLUSIONS OCCURRING ON THE BASIS OF DISORDERS CLOSE TO PROZOPAGNOSIA. SEPARATE EXPRESSIONS OF THE SYNDROME OF FALSE RECOGNITION MAY BE STAGES OF ITS DEVELOPMENT IN AN INCREASING ACUTENESS OF THE PATHOLOGICAL PROGESS. IN SOME CASES THIS SYNDROME ACQUIRES A PROTRACTED COURSE, AND FOR A LONG PERIOD OF TIME DETERMINES THE SEVERITY OF THE MENTAL STATE OF THE PATIENTS. IN A DECREASE OF THE ACUTE STATE, THE SYNDROME DOES NOT ALWAYS DISAPPEAR, BUT MAY ONLY BE TRANSFORMED.

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Functional Analysis

UDC 511

USSR

LAVRIK, A. F.

"Dirichlet Periodic Functions With Functional Equations of the Riemann Type. I"

Tr. Mat. in-ta AN SSSR (Works of the Mathematics Institute, Academy of Sciences USSR), 1971, 112, Part 1, pp 271-290 (From RZh-Matematika, No 8, Feb 72, Abstract No 8A158 from author's abstract)

Translation: The article studies meromorphic functions φ, ζ of finite order representable, given $\operatorname{Re} s > \delta > 0$, by general-type Dirichlet series according to their functional equations

$$A^s \prod_{\nu=1}^{k} \Gamma(\alpha_\nu s + \beta_\nu)\varphi(s) = \omega A^{b-s} \prod_{\nu=1}^{n} \Gamma(\alpha_\nu(\delta - s) + \beta_\nu)\psi(\delta - s), \quad (1)$$

$$\varphi(s+\tau) = \varphi(s), \quad \psi(\delta + \tau) = \psi(s) \quad (2)$$

where $A > 0$, $k \geq 1$, $\alpha_\nu \geq 0$, β are complex; $\omega \neq 0$; Γ is a gamma function.

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USSR

LAVRIK, A. F., Tr. Mat. in-ta AN SSSR, 1971, 112, Part 1, pp 271-290

For functions satisfying equation (1) a general principle for obtaining their nonstandard functional relations is formulated, whereby it is possible, in particular, to describe a class of Dirichlet functions defined by equations (1), (2) and a noncomplex form of the "Riemann-Roch theorem" and in some cases to indicate the location of the zeros of these functions.

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UDC 621.4/.6:533.6

USSR

LAZEREV, Ye. A., BAUL'KIN, A. V., LAVRIK, A. N., RASKIN, V. G.

"Determination of the Permissible Range of Variation in the Control Parameter of a Two-Stage Turbine in a Turbocompressor"

Sb. nauch. tr. Chelyabinsk. politekhn. in-ta (Collected Scientific Works of the Chelyabinsk Polytechnical Institute), 1971, No 87, pp 96-102 (from RZh-Mekhanika, No 10, Oct 71, Abstract No 10B334)

Translation: The paper presents the results of a theoretical study of nozzle control implemented on both stages of a turbine. The ratio of the areas at the outlets from the guide vane assemblies is used as the control parameter. Calculations show that as the degree of expansion of the gas in a stage increases, the optimum values of the control parameter decrease. For instance when the degree of expansion is $\pi_T^* = 0.6$, the optimum value of the control parameter is 1.1, while at $\pi_T^* = 1.0$, the optimum control parameter decreases to 0.8. The permissible ranges of variation in the control parameter ΔI are determined from the condition of a reduction in efficiency by no more than 0.5%: at a degree of expansion of $\pi_T^* = 1.0$, this range is 0.7-0.9, and at $\pi_T^* = 0.6$, it is 0.98-1.28. A. G. Plotkina.

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1/2 023 UNCLASSIFIED PROCESSING DATE--18SEP70

TITLE--PILOTS, TAKE HEED OF BIRDS -U-

AUTHOR-(03)-LAVRIK, V.S., RUBTSOV, I.F., SHERSHER, E.A.

COUNTRY OF INFO--USSR

SOURCE--PILOTS, TAKE HEED OF BIRD (LETCHIK, VNIMANIYE --- PTITSY.) MOSCOW, VOYENIZDAT, 1970, 102 PP

DATE PUBLISHED-------70

SUBJECT AREAS--AERONAUTICS

TOPIC TAGS--BIRD, AIRCRAFT SAFETY, AIRCRAFT VULNERABILITY, COLLISION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1984/0600 STEP NO--UR/0000/70/000/000/0001/0102

CIRC ACCESSION NO--AM0055335

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

UNCLASSIFIED PROCESSING DATE--18SEP70

2/2 023

CIRC ACCESSION NO--AM0055335

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. TABLE OF CONTENTS: PREFACE BIRDS, AIRCRAFT FLIGHT HAZARDS. CERTAIN BIOLOGICAL CHARACTERISTICS OF BIRDS. ANALYSIS OF STATISTICAL DATA ON COLLISIONS OF AIRCRAFTS WITH BIRDS. ANALYSIS OF PHYSICAL PHEOMENA OBSERVED IN COLLISION OF AIRCRAFTS WITH BIRDS. AND MAIN TYPES OF DAMAGE TO AIRCRAFTS. MEASURES ON PREVENTION OF COLLISIONS OF AIRCRAFTS WITH BIRDS. APPENDIX BIBLIOGRAPHY.

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SECTION IV

Pushchino

PCS-69

June 1971

LAVRILOVA, L.P.

Oxo activity

Description:

(U) During this quarterly reporting period, two new articles were located from the Protein Research Institute at Pushchino. On the basis of one of the articles, which dealt with escherichia coli ribosomes, it was possible to [illegible] with the Institute [illegible]. The other article, also on escherichia coli, was issued jointly from the Institute of [illegible] and Extraction of Microorganisms, Moscow, and the Protein Research Institute at Pushchino (332). Previous articles by V. I. Feredorov have been issued from the former Institute. No previous facility association could be located for V. D. Vasil'yev, but it is likely that he represents the latter Institute. This article probably represents some joint work between the two institutes.

(U) As a ready source of reference, given below is a complete listing of personalities identified with the Protein Research Institute to the present time:

Bulatkina, N. V.	Privalov, P. L.
Bershteyn, T. M.	Petrenko, G. A.
Chikhradze, Yu. Sh.	Rasheveskaya, Ye. P.
Fedorov, B. A.	Serdyuk, I. N.
Finkel'shteyn, A. V.	Smirnov, N. I.
Glinskaya, O. V.	Spirin, A. S.
Lavrilova, L. P.	Tikchopulo, Ye. I.
Mitin, Yu. V.	Vasil'yev, V. D.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

1/2 010 UNCLASSIFIED PROCESSING DATE--23DEC70

TITLE--ON THE STABILITY OF MORAL JUDGEMENTS IN SCHOOLCHILDREN -U-

AUTHOR--LAVRINENKO, A.I.

COUNTRY OF INFO--USSR

SOURCE--VOPROSY PSIKHOLOGII, 1970, NR. 3, PP 94-104

DATE PUBLISHED--------70

SUBJECT AREAS--BEHAVIORAL AND SOCIAL SCIENCES

TOPIC TAGS--SOCIAL PROBLEM, PARENT CHILD RELATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3001/0816 STEP NO--UR/0402/70/000/003/0094/0104

CIRC ACCESSION NO--AP0126493

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

2/2 010 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0126493

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE PAPER INVESTIGATES THE STABILITY OF SCHOOLCHILDREN'S MORAL JUDGEMENTS RELATIVE TO PRESSURE FROM ADULTS AND FROM PEERS. DATA OBTAINED SHOW THAT THE STABILITY OF SCHOOLCHILDREN'S MORAL JUDGEMENTS DEPENDS ON AGE AND ON THE CONTENT OF JUDGEMENTS UNDER STUDY. A CONCLUSION IS MADE THAT THE RESULTS OF SOCIOPSYCHOLOGICAL INVESTIGATIONS IN SOME CASES SHOULD BE CONSIDERED IN THE ASPECT OF DEVELOPMENTAL PSYCHOLOGY IN ORDER TO UNDERSTAND THEM MORE CORRECTLY. FACILITY: INSTITUT OBSHCHEY I PEDAGOGICHESKOY PSIKHOLOGII APN SSSR. MOSKVA.

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USSR

UDC 621.762.4.001

NAYDICH, YU. V., LAVRINENKO, I. A., YEVDOKIMOV, V. A., Institute of Problems of Material Science, Academy of Sciences Ukrainian SSR

"Study of Compacting During Liquid-Phase Sintering Under Pressure In the W-Cu System"

Kiev, Poroshkovaya Metallurgiya, No 1, Jan 74, pp 34-39

Abstract: Results are presented from studies of liquid-phase sintering under pressure (LPSP) and the compacting processes which take place at high liquid phase content -- 30-60 vol % in the W-Cu system. Data from the tests showed the same relationship of effect of applied pressure on sample shrinkage (compaction) for different starting granularities, volume content of liquid phase, and sintering temperature. This relationship was that the finer the granularity of the powders, the higher the liquid-phase content, and the higher the sintering temperature, the greater is the degree of compaction. A rise in the degree of solid-phase wettability by the liquid phase promotes improved penetration of the liquid into the particle boundaries, thus improving shrinkage and compaction. It was established that shrinkage and compaction in LPSP are independent or depend very little on solid-phase particle size in systems where there is a notable absence of component

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USSR

NAYDICH, YU. V., et al., Poroshkovaya Metallurgiya, No 1, Jan 74, pp 34-39

solubility and an inelastic solid-phase constituent. A specified plasticity of the solid phase and its incomplete wetting by the liquid phase leads to a certain decrease of shrinkage with increased particle size, and this effect is increased with increased pressure. The obtained results provide the fundamentals for selecting optimum modes which will ensure complete compaction of the sintered composites. Three figures, one table, eight bibliographic references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC 621.37/.39:621.319/314/.631.004

KARTASHEV, I. A., LAVRINENKO, V. V.

"Miniature Piezotransformers for the Feed Networks of Integrated Circuits"

Kiev, Poluprovodnikovaya tekhnika i mikroelektronika, No 6, 1971, pp 46-49

Abstract: A study was made of the problems of creating miniature piezotransformers on frequencies of 10 kilohertz to 1 megahertz. The possible versions of the designs of the micropiezotransformers are analyzed, and results are presented from testing experimental models. On the basis of the results obtained, conclusions are drawn on the prospectiveness of the designs of low-power miniature piezotransformers.

The transformation coefficient with respect to voltage of the simplest designs of the transformers in the maximum efficiency mode varies in various materials from 0.9 to 1.4, and with respect to current it is constant and equal to 0.7. If values of the transformation coefficients with respect to voltage are required from 0.2 to 5, designs with sectional input or output are used, or multilayered designs with transverse or longitudinal energy conversion. When creating multilayered designs of piezotransformers, the problem of joining the individual ceramic plates into a monolithic acoustic unit is solved by using pastes based on glass and silver. The micropiezotransformer made of piezoceramic described in the single-layer execution (3 × 3 × 0,2 mm) with a

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KARTASHEV, I. A., et al., Poluprovodnikovaya tekhnika i mikroelektronika, No 6, 1971, pp 46-49

characteristic weight of 22.5 milligrams transmitted a load of 450 milliwatts on a frequency of 590 kilohertz, which corresponds to 20 watts/gram.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR UDC 621.37/.39:621.519/314/.631.004

KARTASHEV, I. A. and LAVRINENKO, V. V.

"Miniature Piezotransformers for Integrated Circuit Power Supplies"

Kiev, Poluprovodnikovaya tekhnika i mikroelektronika, No. 6, 1971, pp 46-49

Abstract: This article investigates the construction of piezoelectric transformers capable of delivering power levels of units of milliwatts to one watt, and of operation at frequencies of 10 kHz up to several MHz in the context of integrated circuits. Analysis of known structures has shown that structures with excitation of longitudinal acoustical oscillations in rectangular specimens, and structures with excitation of radial oscillations in disc specimens are most satisfactory for satisfying requirements. Expressions are derived for conditions of maximum operating efficiency for transformers of various structural types. Sketches of the different types are given. It is found that high efficiencies of the order of 75% and more can be obtained at frequencies up to 1 MHz for such transformers in integrated circuits.

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USSR

UDC 621.37/39+631.004

NEKRASOV, M. M., LAVRINENKO, V. V., OSADCHUK, V. S., KVITKA, N. A., KOVAL'CHUK, B. M.

"Low-Frequency Dielectric Transformers"

Kiev, Poluprovodnikovaya tekhnika i mikroelektronika, No 6, 1971, pp 69-70

Abstract: A study is made of the problems of creating low-frequency dielectric transformers. Several versions of the designs of such transformers are investigated, and data are presented for individual specimens. Conclusions are drawn regarding the prospects of utilization of low-frequency dielectric transformers. In the transformers, the transformation coefficient depends to a significant extent on the magnitude of the input signal. With a load of 10^6 ohms and an input voltage of 0.1 volts, it reaches values on the order of 20 for one of the investigated transformers manufactured on the basis of the type TsTS-23 ceramic. A formula is presented showing that the basic parameters affecting the resonance frequency of piezotransformers of the flexible type are the length and thickness of the plates. The parameters of several designs of piezotransformers and their operating frequencies are presented in a table.

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USSR UDC 621.37/39+621.004

NEKRASOV, M. N., LAVRINENKO, V. Y., OSADCHUK, V. S., LVITSA, N. A., and KOVAL'CHUK, B. M.

"Low-Frequency Dielectric Transformers"

Kiev, Poluprovodnikovaya tekhnika i mikroelektronika, No. 6, 1971, pp 69-70

Abstract: This short informative article amounts to an introductory treatment of the development of piezoelectric transformers with an operating frequency of 50 and 400 Hz, of the type widely used in technology. A schematic diagram of piezoelectric transformers of the bending type is shown and explained; it consists of two dielectric plates glued together with epoxy resin, and connected through copper or silver electrodes to the external circuit. The theory of operation of the transformer is explained in qualitative terms, and a formula for the fundamental frequency of the bending oscillations is given in terms of the Young's modulus, the density, the thickness, and the length of the second -- i.e., the output or bending -- plate of the transformer. Curves are plotted for the transformer characteristic as a function of the bending magnitude; they indicate that the transformation characteristic depends essentially on the

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

NEKRASOV, M. M., et al., Poluprovodnikovaya tekhnika i mikroelektronika, No 6, 1971, pp 69-70

input signal amplitude and the applied voltage. The data was taken for transformer type No 3, made from ceramics of the TsTS-23 brand. The authors are with the Kiev Polytechnical Institute.

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC 621.396.6-181.5

NEKRASOV, M. M., LAVRINENKO, V. V.

"Piezonics -- a New Area of Microelectronics"

Elektron. tekhnika. Nauch.-tekhn. sb. Materialy (Electronic Engineering. Scientific and Technical Collection. Materials), 1971, No 2, pp 44-51 (from RZh-Radiotekhnika, No 10, Oct 71, Abstract No 10V176)

Translation: In recent years numerous examples of using the electromechanical properties of a solid state in the construction of elements and devices for electronics have appeared. It is proposed that the work with respect to creation and study of such devices be placed in a field called piezoelectronics (piezonics, for short). A study was made of the general attributes and characteristics of piezoelectronic elements permitting the conclusion to be drawn that work in this area is important.

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USSR

UDC 621.396.6-181.5

KARTASHEV, I.A., LAVRINENKO, V.V.

"Miniature Piezotransformer For Power-Supply Networks Of Integrated Circuits"

Poluprovodn. tekhn. i mikroelektronika. Resp. mezhved. sb. (Semiconductor Technology And Microelectronics. Republic Interdepartmental Collection), 1971, Issue 4, pp 46-49 (from RZh--Radiotekhnika, No 9, Sept 1971, Abstract No 9V307)

Translation: The problems are considered of creating miniature piezotransformers at frequencies of 10 kHz--1 MHz. An analysis is presented of possible variations of the construction of micropiezotransformers and the results are given of tests of prototypes. On the basis of the results obtained, conclusions are drawn concerning the prospects for construction of low-power miniature piezotransformers. 5 ill. 2 ref. Summary.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR UDC: 621.396.69:621.314.2(088.8)

NEKRASOV, M. M., LAVRINENKO, V. V., PLAKHOTNYY, N. V., KHRASHCHEVSKIY, V. A., Kiev Polytechnical Institute

"A Method of Making Multilayered Piezoelectric Transformers"

USSR Author's Certificate No 264497, filed 26 Jul 68, published 12 Jun 70 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12V387 P)

Translation: A method is proposed for making multilayered piezoelectric transformers. The procedure is based on making the excitation sections from separate plates with subsequent acoustic joining of the sections. To increase the trnasformation ratio, useful power and maximum permissible stresses, the plates of the excitation section are made from an unannealed piezoelectric material by pouring the slip onto the substrate, and acoustic joining of the sections is done simultaneously with brazing of the electrodes by pressing the sections in bundles at the ceramic sintering temperature.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

VOLKOVICH, V. L., LAVRINENKO, Ye. P.

"The Problem of Compromise Control in Two-Level Hierarchaical Systems Considering Random Perturbations"

Avtomatika i vychisl. tekhn. [Automation and Computer Technology], 1973, No 2, pp 48-55 (Translated from Referativnyy Zhurnal - Kibernetika, No 8, 1973, Abstract No 8 V448 by the authors)

Translation: The selection of a compromise control in a two-level hierarchaical system is studied, considering random perturbations. It is shown that this problem arises in the selection of the probabilities with which limitations are to be fulfilled in subsystems of the first level. The compromise controlls and probabilities are selected on the basis of the method of equivalent transforms of the problem of stochastic programming to deterministic form. The algorithm suggested is illustrated by an example.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR UDC: 62-506:519.8

VOLKOVICH, V. L. and LAVRINENKO, Ye. P.

"The Problem of Compromise Control in Two-Level Hierarchical Systems With Random Perturbations Taken Into Account"

Riga, Avtomatika i vychislitel'naya Tekhnika, No 2, March-April 1973, pp 48-55

Abstract: Since complex control systems with hierarchical structures usually present research difficulties, the authors propose a procedure for choosing a compromise control in a two-level hierarchical system with random perturbations taken into account. The object of the control is discussed and a statement of the problem is given. An algorithm for choosing the compromise control is developed and is constructed in the form of an iterational procedure. An illustration is given involving a set of aircraft $S = \{1,\ldots,M\}$ in the control zone, which can be considered as a subsystem of the first level. The second-level subsystem is the dispatching service controlling all the aircraft in set S. The problem is solved in a three-step process.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR UDC: 512.25/.26+519.3:330.115

LAVRINENKO, Ye. P.

"On a Stochastic Programming Problem"

Kibernet. i vychisl. tekhn. Resp. mezhved. sb. (Cybernetics and Computer Technology. Republic Interdepartmental Collection), 1971, vyp. 3, pp 68-71 (from RZh-Kibernetika, No 12, Dec 71, Abstract No 12V831)

Translation: The paper deals with questions of the transition in single--stage stochastic programming problems with probabilistic limitations, to equivalent deterministic mathematical programming problems. A method is proposed for conversion to a problem in convex programming. The procedure is based on using a Chebyshev inequality in the case where only the mathematical expectations and variances of the parameters of the initial problem are known. Author's abstract.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR UDC 512.25/.26+519.3:330.115

LAVRINENKO, Ye. P., TRUBIN, V. A.

"One Problem of Operative Control of Air Traffic"

Mat. Metody Issled. i Optimiz. Sistem. Vyp. 5 [Mathematical Methods of Investigation and Optimization of Systems, No 5 -- Collection of Works], Kiev, 1970, pp 3-12, (Translated from Referativnyy Zhurnal, Kibernetika, No 6, 1971, Abstract No 6 V502).

Translation: The problem of composition of a graph of utilization of a runway is reduced to a problem of minimization of

$$\sum_{i=1}^{n} c_i |t_i - T_i|$$

under the conditions $t_{i+1} - t_i \geq \tau_i$, $a_i \leq t_i \leq b_i$. Certain properties of the solutions of this problem are established, on the basis of which an effective specialized algorithm is constructed.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

UDC: 512.25/.26+519.3:330.115

USSR

LAVRINENKO, Ye. P.

"Use of Stochastic Programming in the Problem of Controlling Air Traffic"

V sb. Tekhn. kibernetika. Vyp. 16 (Technical Cybernetics. No 16--collection of works), Kiev, 1970, pp 50-56 (from RZh-Kibernetika, No 9, Sep 71, Abstract No 9V503)

[No abstract]

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

LAVRINENKOV, V. (Col. Gen) M.I

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

KRIMER, M. Z., SHAMSHURIN, A. A., and LAVRINENKO, YE. S.

"Synthetic Method for Geranylacetone"

USSR Author's Certificate No 352876, filed 30 Nov 70, published 30 Oct 72 (from RZh-Khimiya, No 19, Oct 73, Abstract No 19N514P)

Translation: A synthetic method has been proposed for geranylacetone (6,7-trans isomer of 2,6-dimethyl-Δ 2,6-undecadienone-10) (I), used in the synthesis of terpenoids and biologically active compounds such as juvenile hormones. Example. To 50 g linalool 195 g of 40% HBr is added at a temperature ranging from -5 to 10° at a rate keeping the temperature at the specified range. The mixture is kept for 1 hr at the temperature ranging from -5 to 10°, $CHCl_3$ is removed, the extract is rapidly washed with a saturated solution of $NaHCO_3$ and water, dried yielding 62 g of the crude product which is then added at 2-5° to a solution of sodium acetoacetate (from 4.7 g Na and 30 g acetoacetate in 70 ml MeOH). The mixture is stirred for 2 hrs at 2-5° and 2 hrs at 60-65° with concurrent evaporation of the solvent under a weak vacuum. 110 ml of a 10% NaOH solution is added to the residue, stirred for 2 hrs at 60-65°, cooled, acidified with conc. HCl, C_6H_6 is evaporated, the extract is washed with saturate solution of $NaHCO_3$, water, dried and evaporated yielding 19.5 g I, b. p. 102-4/5°, n_D^{20} 1.4670,, containing 8-10% of the nerylacetone (cis isomer). 1/1

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LAVRINENKOV V.D. (Lt.Gen. Avn.) M,/

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USSR

PEKARSKAYA, L. S., LAVRINOVICH, E. S.

"Mutagenic Effect of Drugs With Psychotropic Activity"

Minsk, V sb. Vopr. med. genet. i genet. cheloveka (Problems of Medical Genetics and Human Genetics--collection of works), Nauka i tekhn. Press, 1971, pp 162-166 (from RZh-Biologicheskaya Khimiya, No 23, Dec 71, Abstract No 23F2601)

Abstract: In experiments on Drosophila melanogaster, a study was made of the genetic effect of 11 drugs with psychotropic effect on "chemical" treatment of the males for the entire development cycle. The compounds E-136B (2,6-dimethyl-4-hydroxy-1,2,3,4-tetrahydroquinoline hydrochloride) and D-43 (2-methyl-4-hydroxy-1,2,3,4-tetrahyroquinoline base) are medium and weak mutagens for drosophila. The compounds E-314 and E-323 (p-hydroxyanilide hydrochlorides of B-morpholinopropionic and B-diethylaminopropionic acids) lower the frequency of occurrence of recessive sex-linked lethal mutations in Drosophila melanogaster by approximately two times.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR UDC 629.78.017.2

NOVOSELOV, V. S. and LAVRINOVICH, K. K., Leningrad Institute

"Determining the Angular Position and Angular Velocities at the End of a Segment of Active Change of Angular Velocity"

Leningrad, Mekh. Upravlyayem. Dvizheniya i Probl. Kosmich. Dinamiki--Sbornik (Mechanics of Motion Control and Problems of Space Dynamics--Collection of Works), 1972, pp 177-181 (from Referativnyy Zhurnal--Raketostroyeniye, No 5, May 73, Abstract No 5.41.134)

Abstract: A satellite is examined having a device capable of turning the satellite around one of its axes at the required instant. The problem is solved of determining the change in angular velocity in the course of a specified instant when this device operates. The problem is solved with the aid of integration of Euler equations for the condition when the moment of the device significantly exceeds all the remaining disturbing moments. By introducing propositions which describe the actual situation, formulas were obtained for determining the angular velocity projections at the moment of turning on the ?razgonnyy? advice. 1 bibliographic reference.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC: 517.925.11

LAVRINOVICH, L. S.

"Second-Order Dynamic System With a Specified Particular Integral"

Minsk, Differentsial'nyye Uravneniya, No. 4, 1971, pp 622-630

Abstract: This article is apparently the third in a series published in the same journal. The first two considered the system of equations

$$\frac{dx}{dt} = a_1x + a_2y + a_3x^3 + a_4x^2y + a_5xy^2 + a_6y^3,$$

$$\frac{dy}{dt} = b_1x + b_2y + b_3x^3 + b_4x^2y + b_5xy^2 + b_6y^3$$

which has a particular integral of the form

$$F(x,y) = Ax^3 + 3Bx^2y + 3Cxy^2 + Dy^3 + 3Ex^2 + 6Fxy + 3Gy^2 + 3Hx + 3Ky + L = 0,$$

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

LAVRINOVICH, L. S., Differentsial'nyye uravneniya, No. 4, 1971, pp 622-630

when the equation

$$H(k) = Ak^3 + 3Bk^2 + 3Ck + D = 0$$

has a double root or three different and real roots. The present installment considers the case in which all three roots of the equation $H(k) = 0$ are equal but do not satisfy the equation

$$Ek^2 + 2Fk + G = 0.$$

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

1/2 028 UNCLASSIFIED PROCESSING DATE--23OCT70

TITLE--EFFECT OF AN INITIATOR AND AN ACCELERATOR ON THE THIXOTROPIC PROPERTIES OF A POLYESTER RESIN WITH AEROSIL ADDITIVES -U-

AUTHOR-(03)-LAVRISHCHEV, L.P., TRAPEZNIKOV, A.A., SHALOPALKINA, T.G.

COUNTRY OF INFO--USSR

SOURCE--LAKOKRASOCH. MATER. IKH PRIMEN. 1970, (1), 10-12

DATE PUBLISHED--------70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--POLYESTER RESIN, FILLER, THIXOTROPY, ORGANOCOBALT COMPOUND, MECHANICAL FAILURE, MATERIAL DEFORMATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--1997/0430 STEP NO--UR/0303/70/000/001/0010/0012

CIRC ACCESSION NO--AP0119366

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

2/2 028 UNCLASSIFIED PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0119366

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE STRESS DEFORMATION DIAGRAMS OF SOLNS. OF POLYESTER RESIN PN 1 CONTG. AEROSIL IN STYRENE SHOWED THAT THE PRESENCE OF CO NAPHTHENATE (I) INCREASED THEIR THIXOTROPY. THE ADDN. OF CUMENE HYDROPEROXIDE AS WELL AS I TO THESE SOLNS. GAVE LESS VISCOUS SOLNS. AT REST AND SLOWER RECOVERY TIMES AFTER THE COMPLETE SOLN. STRUCTURE MCECH. BREAKDOWN.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

1/2 039 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--ACTION OF THE INITIATOR AND THE ACCELERATOR AS SURFACE ACTIVE AGENTS IN A MEDIUM POLYMERIZING IN THE PRESENCE OF A FILLER -U-

AUTHOR-(02)-TRAPEZNIKOV, A.A., LAVRISHCHEV, L.P.

COUNTRY OF INFO--USSR

SOURCE--DOKL. AKAD. NAUK SSSR 1970, 192(2), 376-9 (PHYS CHEM)

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--SURFACE ACTIVE AGENT, FILLER, POLYMERIZATION, HYDROPEROXIDE, ORGANOCOBALT COMPOUND, NAPHTHENE, POLYESTER RESIN, STYRENE, SHEAR STRENGTH, HYDROGEN BONDING, ETHYLENE GLYCOL, MALEIC ACID, PHTHALIC ANHYDRIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/1132 STEP NO--UR/0020/70/192/002/0376/0379

CIRC ACCESSION NO--AT0134419

UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

2/2 039 UNCLASSIFIED PROCESSING DATE--18NOV70

CIRC ACCESSION NO--AT0134818

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE INFLUENCE OF CYMYL HYDROPEROXIDE (I) AND CO NAPHTHENATE (II) ON SYSTEMS CONTG. PN, I (III) (A POLYESTER PREPD. FROM DIETHYLENE GLYCOL, MALEIC ACID, AND PHTHALIC ANHYDRIDE), STYRENE, AND (OR) AEROSIL (SIO SUB2) FILLER WAS STUDIED. ADDN. OF I OR I AND II INCREASED THE SOLY. OF III IN STYRENE AND DECREASED THE SOLN. VISCOSITY, WHEREAS II ALONE DECREASED SOLY. AND INCREASED SOLN. VISCOSITY. III ADDED TO AEROSIL STYRENE PASTES, CONTG. STRUCTURES OF HIGH SHEAR STRENGTH DUE TO DISPERSION FORCES AND H BONDING, WAS A SURFACE ACTIVE AGENT, LOWERING THE STRENGTH OF THE AEROSIL STRUCTURES. II AT 4-50PERCENT CONCNS. LOWERED STRENGTHS GREATLY AND ADDNS. OF I GRADUALLY DECREASED THE STRENGTH OF THE STRUCTURES. AT 50-70PERCENT II CONCNS., THE STRENGTH OF THE STRUCTURES ROSE AGAIN. AT LARGER THAN 65PERCENT CONCNS. OF III IN STYRENE CONTG. 10PERCENT AEROSIL, II DECREASED THE STRENGTH OF THE STRUCTURES AND FLOCCULATED THE AEROSIL PRESUMABLY BY DESOLVATING AND INCREASING THE ASSOCN. OF III; BUT WITH LARGER THAN 70PERCENT III SOLNS., I INCREASED THE STRENGTH BECAUSE OF ITS STRONG PEPTIZATION OF III PROBABLY BY DESTROYING INTRAMOL. AND INTERMOL. III POLAR BONDS AND FORMING HYDROPEROXIDE H BONDS BETWEEN I AND III. MORE EVEN DISTRIBUTION OF III PROBABLY FACILITATES GROWTH OF THE AEROSIL NETWORK. FACILITY: INST. FIZ. KHIM., MOSCOW, USSR.

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC 621.357.8:669.21-418

SOROKIN, I. N., SEMYACHKO, G. YA., and LAVRISHCHEV, V. P.

"Anodic Stripping of Gold Films in Solutions of Halide Acids"

Moscow, Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. Tekhn. (Collection of Scientific Papers on Problems in Electronics-Analysis. Moscow Institute of Electronics Technology), Vyp 11, 1972, pp 113-119 (from Referativnyy Zhurnal -- Khimiya, No 7, 1973, Abstract No 7L334)

Translation: A study was made of the process of anodic dissolution of gold films in solutions of halide acids. The acid HCl is the most effective and most stable electrolyte. The influence of temperature on the anodic process was examined by the isopotential method. The experimental data indicated that the dissolution of the thin gold films proceeded via a concentration regime.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC 621.357.8:669.21-418

SEMYACHKO, G. YA., SOROKIN, I. N., and LAVRISHCHEV, V. P.

"Kinetics of Anodic Stripping of Thin Gold Films in Tartaric Acid Solutions of Thiourea"

Moscow, Sb. nauch. tr. po probl. mikroelektron. Mosk. in-t elektron. Tekhn. (Collection of Scientific Papers on Problems in Electronics-Analysis. Moscow Institute of Electronics Technology), No 11, 1972, pp 105-112 (from Referativnyy Zhurnal -- Khimiya, No 7, 1973, Abstract No 7L333)

Translation: A study was made of the kinetic relationships of the electrodissolution of gold films in thiourea solutions. The influence of the concentrations of thiourea and tartaric acid in the solution and the temperature on the rate of the anodic process were determined. It was established experimentally that the dissolution of the gold films during electrolysis went via a diffusion mechanism.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC 681.382.002

TSYRLIN, A.D., KLIMKOVICH, A.V., LAVRISHCHEV, V.P.

"Use Of A Method Of Determining Luster For Evaluation Of Microprofile Of The Surface Of Photoresist Films Applied In Electrostatic Field"

Elektron.tekhnika. Nauch.-tekhn.sb. Poluprovodn. pribory (Electronic Technics. Scientific-Technical Collection. Semiconductor Devices), 1971, Issue 7(64), pp 35-41 (from RZh:Elektronika i yeye primeneniye, No 5, May 1972, Abstract No 5B394)

Translation: A method is considered for evaluating the character of the microprofile of the surface of films of photoresist, obtained by sputtering of its solutions in an electrostatic field, by the magnitude of the luster [gloss] of the system film--substrate. The connection is shown between the parameters of the microprofile of the film source and the magnitudes of the relative decrease of the luster corresponding to them. Summary.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC: 621.3.049.75:774

LAVRISHCHEV, V. P., VOZHENIN, I. N., KANDYBA, P. Ye., MOROZOVA, R. A., FOMENKO, P. A.

"A Method of Making Microcircuits"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 13, 1970, Author's Certificate No 271595, filed 6 May 68, p 41

Abstract: This author's certificate introduces a method of making microcircuits based on repeated selective chemical etching. As a distinguishing feature of the patent, the procedure is designed to provide a broad range of resistor values in a single microcircuit and to simplify manufacturing technology. Resistive layers with various resistivities are applied in sequence to the substrate in order of decreasing resistivity, and the technological layer is used for making low-value resistors.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC 537.312.62

ARSHINOV, V. I., DMITRIYEVA, S. K., KANDYBA, P. Ye., KOMAROVSKIKH, N. I., LAVRISHCHEV, V. P., LAPIR, G. M., MAZITOV, R. K.

"Film Cryotrons Based on Au-Pb Intermetallic Compounds"

Elektron. tekhnika. Nauch.-tekhn. sb. Mikroelektronika (Electronic Technology. Scientific and Technical Collection. Microelectronics), 1971, vyp. 3(29), pp 92-97 (from RZh-Radiotekhnika, No 12, Dec 71, Abstract No 12D691)

Translation: The paper describes the manufacturing technique and results of an experimental study of a new type of film cryotron having a diode of intermetallic compounds of gold with lead, and a gate and passive lines of lead. Basic electrophysical indices for the proposed type of cryotron are higher and less sensitive to deviations from given technological conditions than for conventional tin-lead cryotrons. Resumé.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC 621.396.6-181.48(088.8)

ARSHINOV, V. I., DMITRIYEVA, S. K., KANDYBA, P. Ye., KOMAROVSKIKH, N. I., LAVRISHCHEV, V. P., LAPIR, G. M., MAZITOV, R. K., OLEYNIKOVA, V. A.

"A Method of Making Diodes for Thin-Film Cryotrons"

USSR Author's Certificate No 297129, filed 16 Oct 69, published 6 Apr 71 (from RZh-Radiotekhnika, No 11, Nov 71, Abstract No 11V368 P)

Translation: The proposed method for making diodes for thin-film cryotrons is based on sequential application of films of gold and a superconducting metal. As a distinguishing feature of the patent, a lead film with subsequent annealing at a temperature of 100-120°C is used as the superconducting metal to improve the technique of making the cryotronic integrated microcircuits, to increase speed, and to make the output signal more reliable. Resumé.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR UDC: 621.318.57

ARSHINOV, V. I., DMITRIYEVA, S. K., KANDYBA, P. Ye., KOMAROVSKIKH, N. I., LAVRISHCHEV, V. P., LAPIR, G. M., MAZITOV, R. K., OLEYNIKOVA, V. A.

"A Method of Making Diodes for Thin-Film Cryotrons"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 9, Mar 71, Author's Certificate No 297129, Division H, filed 16 Oct 69, published 2 Mar 71, p 176

Translation: This Author's Certificate introduces a method of making diodes for thin-film cryotrons. The procedure is based on sequential application of gold and superconducting metal films. As a distinguishing feature of the patent, the technology of making cryotron integrated circuits is improved and the speed and output signal voltage of the cryotrons are increased by using a lead film as the above-mentioned metal with subsequent annealing at 100-120°C.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

1/2 013 UNCLASSIFIED PROCESSING DATE--20NOV70

TITLE--EFFECT OF HYDROCORTISONE ON HEALING OF OSTEOCHONDRAL WOUND IN INTRAARTICULAR FRACTURES, EXPERIMENTAL STUDY -U-

AUTHOR-(02)-LAVRISHCHEVA, G.I., VEDIZIZHEV, G.M.

COUNTRY OF INFO--USSR

SOURCE--ORTOPEDIYA, TRAVMATOLOGIYA I PROTEZIROVANIYE, 1970, NR 5, PP 29-33

DATE PUBLISHED--------70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--BONE FRACTURE, HYDROCORTISONE, WOUND HEALING, ANTIINFLAMMATORY DRUG

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/0724 STEP NO--UR/9115/70/000/005/0029/0033

CIAC ACCESSION NO--AP0131622

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5"

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UNCLASSIFIED PROCESSING DATE--20NOV70

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CIRC ACCESSION NO--AP0131322

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. IN AN ENDEAVOR TO CLARIFY THE EFFECT OF SMALL DOSES OF HYDROCORTISONE ON THE POSTTRAUMATIC INFLAMMATION AND REPARATIVE PROCESSES IN THE JOINT IN INTRAARTICULAR FRACTURES, TWO SERIES OF EXPERIMENTS HAVE BEEN CARRIED OUT ON 50 RABBITS. IN CONTROL (I) SERIES HYDROCORTISONE WAS NOT INJECTED INTO THE KNEE JOINT CAVITY AFTER INFLICTION OF INTRAARTICULAR FRACTURE WITH SUBSEQUENT OSTEOSYNTHESIS. HYDROCORTISONE WAS ADMINISTERED IN SERIES II OF THE EXPERIMENT. DATA OF HISTOLOGICAL STUDIES INDICATE THAT INTRAARTICULAR INJECTION OF SMALL DOSES OF HYDROCORTISONE DECREASED THE POSTTRAUMATIC INFLAMMATION AND HAD NO INHIBITING EFFECT ON THE HEALING OF OSTEOCHONDRAL WOUND. MOREOVER, AFTER PRECISE APPOSITION OF FRAGMENTS IN NONE OF THE ANIMALS DAS ARTHROSIS DEFORMANS DEVELOPED AT LATE DATES. IN THE CONTROL GROUP ARTHROSIS DEFORMANS DEVELOPED IN ALL THE CASES.

FACILITY: PATOLOGOANATOMICHESKOGO OTD. TSENTRAL'NOGO NAUCHNO-ISSLEDOVATEL'SKOGO INSTITUTA TRAVMATOLOGII I ORTOPEDII AND KAFEDRY TRAVMATOLOGII I ORTOPEDII 2-GO MOSKOVSKOGO ORDENA LENINA MEDITSINSKOGO INSTITUTA IM. N. I. PIROGOVA.

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USSR

LAVRISHCHEVA, Ye. M.

"Syntactically Controlled Debugging of Initial Programs"

Konstruirovaniye i vnedreniye novykh sredstv vychisl. tekhn. T. I [Design and Introduction of New Computer Equipment. Volume I -- Collection of Works], Kiev, 1971, pp 67-78 (Translated from Referativnyy Zhurnal - Kibernetika, No 8, 1973, Abstract No 8 V603 by V. Mikheyev)

Translation: An SM language is suggested for representation of the grammar of languages designed for purposes of syntactical analysis and testing, to supplement the known metal languages of Khomskiy, Bekmanov-Naurovskiy, V. Vel'bitskiy, and Ye. L. Tsiyushchenko. The distinguishing feature of this language is that it contains no nonterminal symbols in explicit form, allowing effective syntactical testing algorithms to be constructed. One shortcoming of this method of assigning grammars with program realization for specific languages is the large number of rules, requiring large memory volume. It is therefore suggested that additional rules be introduced, allowing a significant reduction of the total number of rules with indirect realization, and allowing a grammar to be fixed which is convenient for purposes of analysis.

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USSR

UDC: 8.74

BORISENKO, L. G., LAVRISHCHEVA, Ye. M.

"Dialogue Semantic Debugging of Initial Programs on the Dnepr-2 Machine"

Teoriya Yazykov i Metody Postroyeniya Sistem Programmir. [Theory of Languages and Methods of Construction of Programming Systems--Collection of Works], Kiev-Alushta, 1972, pp 295-309 (Translated from Referativnyy Zhurnal Kibernetika, No 11, 1972, Abstract No 11V569, by V. Mikheyev)

Translation: The primary problems involved in dialogue semantic debugging of programs are studied. Dialogue semantic debugging refers to the process of initial program debugging in a time-sharing mode up to the point of production of check printouts for the working program. The effectiveness of the dialogue semantic debugging using the Dnepr-2 machine (OPAL system) is evaluated. Examples of two debugging sequences for one initial program written in [illegible] are presented.

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USSR

KAREV, P. B., LAVINSKIY, G. V., TOMASHPOL'SKIY, Yu. V.

"Determination of Probability of Detection of an Object with Two-Stage Search"

Teoriya Optimal'n. Resheniy [The Theory of Optimal Decisions -- Collection of Works], Kiev, 1972, pp 127-130 (Translated from Referativnyy Zhurnal, Kibernetika, No 3, Moscow, 1973, Abstract No 3 V300 by the authors).

Translation: One typical problem in search systems is two-stage search for objects in a region. One variety of this problem is presearch, when the observer is already located in the area of possible positions of the target and goes over to the use of detection methods assuring more precise determination of the location of the target than in the preceding stage of search. One of the basic indicators of effectiveness of solution of this problem is the probability of detection of an object, which depends on the accuracy of determination of the location of the target during the search stage and the characteristics of the detection apparatus used in presearch. An expression is produced for this probability in one natural case.

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USSR UDC 669.245'26'27:539.4.014.13

GAYDUK, V. V., LAVRENKO, A. S., SUKHANOV, Yu. V., Zaporozh'ye Machine Building Institute

"Dilatometric Method of Evaluating Temperature Stresses In Nichrome-Tungsten Compositions"

Kiev, Problemy Prochnosti, No 9, Sep 72, pp 108-111

Abstract: A method is outlined for determining the internal heat stresses in compositions with a matrix of EI435 alloy and tungsten wire. The procedure is based on analysis of dilatometric curves of expansion. It is shown that the matrix is subjected to tensile stresses at low temperatures and compressive stresses at high temperatures. It is found how mechanical stresses influence the properties of the matrix as a whole. It is shown that the magnitude and sign of the internal stresses in the matrix must be taken into consideration when making parts from composition sheet material by bending or stamping.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR UDC 621.396.6-181.48

BORISOV, B. S., VARLAMOV, I. V., and LAVRISHCHEV, V. P.

"Optoelectronic Microcircuits for Galvanic Uncoupling"

Elektron. prom-st'. Nauch.-tekhn. sb. (Electronics Industry. Collected Scientific-Technical Works), 1972, No 2, pp 70-73 (from RZh-Radiotekhnika, No 11, Nov 72, Abstract No 11 V213)

Translation: An example is given for the classification of optoelectronic uncoupling microcircuits. Data is given on the use of light diodes and photoreceptors in these circuits. Four new microcircuits are described: hybrid switching device (optoelectronic pair of plus amplifiers), commutators of high voltage circuits, direct current commutator up to 50v based on semiconductor triodes, and an analog signal commutator. Original article: six illustrations and ten bibliographic entries. N.S.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR UDC 547.756 + 541.67

TSUKERMAN, S. V., BUGAY, A. I., IZVEKOV, V. P., and LAVRISHIN, V. F.,
Khar'kov State University imeni A. M. Gor'ki

"Dipole Moments of Indole Analogs of Chalcone"

Riga, Khimiya Geterotsiklicheskikh Soyedinaniy, No 8, Aug 72, pp 1083-1086

Abstract: On the basis of dipole moment measurements, the most probable conformations of 22 indole analogs of chalcone have been established: in respect to the substituents on the vinyl group they are trans-isomers, and considering the orientation of the aliphatic double bond with respect to the carbonyl group, the represent s-cis-conformers. The predominant rotational isomer appears to be the anti-s-cis form, although not exclusively so. Introduction of electron donting and electron accepting substituents onto the phenyl ring of the 1-(indolyl-3)-3-phenylpropenones leads to a slight decrease of the dipole moments. This change in the dipole moment correlates to some extent with the Hammett σ-constants. When the phenyl ring in isomeric 1-(indolyl-3)-3-phenylpropenones is substituted by a furyl, thienyl or selenylenyl group a small increase in the dipole moment is observed.

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USSR UDC 621.382.2

GONCHAROV, V. N., KLYUCHNIKOV, V. N., KRYLOV, L. N., LAVRISHIN, Yu. A., LONCHIN, M. A., SEREZHKIN, Yu. N., UCHAYKIN, I. G., and YAMSHKIN, Yu. M.

"Role of Microplasma Phenomena in Determining the Properties of Silicon Avalanche Rectifiers"

Uch. zap. Mordovsk. un-t (Scientific Notes of Mordovskiy University), 1970, Issue 82, pp 3-20 (from RZh-Elektronika i yeye primeneniye, No 8, August 1971, Abstract No 8B195)

Translation: The effect of microplasma phenomena on the characteristics of avalanche rectifiers is considered. A model of the microplasma is presented and the reasons for formation of microplasm are considered. The distribution of microplasm in avalanche rectifiers is presented for the area of the p-n junction and for breakdown voltages. Means are considered for an increase of the breakdown energy of avalanche rectifiers. Summary.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC: 8.74

POPOV, A. A., LAVRIV, Ya. M., STARCHIK, V. P., CHEKAYLO, M. A., SHUL'GA, V. A., SHCHITKO, V. N., YANENKO, V. M.

"Automated System for Statistical Analysis of Medical and Biological Data"

Kibernet. i vychisl. tekhn. Resp. mezhved. sb. (Cybernetics and Computer Technology. Republic Interdepartmental Collection), 1972, vyp. 14, pp 76-82 (from RZh-Kibernetika, No 5, May 73, abstract No 5V778 by the authors)

Translation: The paper discusses the functioning of an automated system for analysis of medical and biological data. Requirements for the software system are given. Statistical methods and criteria are presented which are realized in the system.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC: 681.3.06:51

LAVRIV, Ya. M., MEL'NIKOV, V. G., POPOV, A. A., STARCHIK, V. P., YANENKO, V. M.

"Formation of an Information Block of Medical Documents in a Clinical Medical Information System"

V sb. Biol., med. kibernet. i bionika (Biology, Medical Cybernetics and Bionics--collection of works), vyp. 3, Kiev, 1970, pp 3-11 (from RZh--Kibernetika, No 7, Jul 71, Abstract No 7V720)

Translation: The existing practice of collecting and storing information in a public health system leads to redundant and partially erroneous data presented in handwritten form, inconvenient for analysis and formulation of a diagnosis. To effectively ensure public health functions, a medical information system is proposed which is a cybernetic system of the "man-automaton" type. The system includes the medical personnel who take care of collecting medical information on the appropriate standard form for the history of an illness as well as evaluating the results of information processing; the system also includes the mathematicians who develop the mathematical apparatus for collecting and processing data

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LAVRIV, Ya. M. et al., Biol., med. kibernet. i bionika, vyp. 3, Kiev, 1970, pp 3-11

(create a flowchart and language for communication between the digital computer and man, algorithms and programs for processing medical information), and the engineering and technical personnel who service the technical facilities of the system. The authors note two approaches to solution of the problems of ensuring effective communication between the physician and the digital computer, and operational accumulation and transmission of information in a form to which the physician is accustomed: 1) development of a specialized medical logical information language, which requires formalizing the representation of the initial data, introducing correctives into the identification of terms, etc.; 2) development of a standardized form for the history of an illness as a preliminary stage to complete formalization. The principles of standardized forms for the history of an illness in the cardiological group are described. The form consists of an explanatory section (algorithms for examination of a patient for various illnesses) and a summarizing section (model or parameters of the state of the patient). An example of a fragment of a standardized form for the history of an illness is described ("Circulatory Organs"). A. Doroshenko.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR UDC: 621.396.6:621.318

GERBERG, A. N., LAVROSHCHUK, N. A., RABINOVICH, Ya. D.

"Digital Computer Analysis of Bar Type Permanent Magnets"

Elektron. tekhnika. Nauchno-tekhn. sb. Ferrit. tekhn. (Electronic Technology. Scientific and Technical Collection. Ferrite Technology), 1970, vyp. 2 (24), pp 59-69 (from RZh-Radiotekhnika, No 12, Dec 70, Abstract No 12V425)

Translation: By using the equation for the demagnetization curve of a permanent magnet, the authors derive equations for analyzing bar magnet systems made from materials with nonlinear characteristics (cast anisotropic alloys). A method for digital computer solution of these equations is demonstrated. The computational errors are analyzed. Five illustrations, bibliography of eight titles. N. S.

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AA0052675 LAVROV A. P. UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General, Derwent, 2-70

243167 GANTRY CRANE WITH PROGRAMME CONTROL e.g. for use in stores, has load trolley carrying a vertically-moving traverse with load grips. The traverse has guide rollers on either side, moves in slots in brackets fixed to the load carriage. This prevents the load deviating from the vertical while being lowered. Gantry 1 rests via legs 2 and 3 on trolleys 4 and 5. Load trolley 6 carries traverse 7 with vacuum grips 8. On traverse 7 is vacuum receiver 9. The traverse has guide rollers 10 moving in slots 11. On trolley 6 are mechanisms for moving the trolley, raising and lowering the traverse, and a vacuum pump, covered by casing 12. The crane-moving mechanism is under casing 13. The drives of these mechanisms are supplied via suspended cable 14. Control mechanism is in box 15. There is a hand control panel for emergencies. To

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operate under programme control, the operator selects on the control panel the number of the position where the load is to be lowered, and presses the "start" button. The crane then moves to the required position, picks up the load, returns and lays it in the working position.
10.4.67. as 1148575/27-11, KLIMENKO, I.M. et al
(26.9.69) Bul. 16/5.5.69. Class 35b, Int. Cl.
B 66c.

Klimenko, I. M.; Kulygin, V. V.; Lavrov, A. A.; Vigont, R. P.

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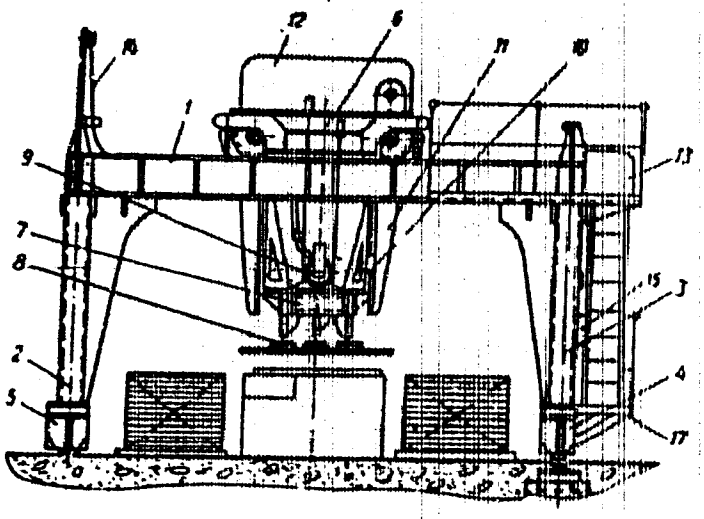

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USSR

UDC [537.226+537.311.33]:[537.535]

GEORGOBIANI, A. N., LAVROV, A. V., TODUA, P. A., CHICHUCHEVA, V. A.

"Characteristics of the Electroluminescence of Homogeneous Zinc Sulfide Single Crystals Caused by Acoustoelectric Instability"

Kratkiye soobshch. po fiz. (Brief Communications in Physics), 1971, No. 6, pp 31-34 (from RZh Fizika, No 12, Dec 71, Abstract No 12Ye144)

Translation: A study of the electroluminescence in ZnS:I crystals which occurs upon the rise of acoustoelectric instability is described. The relaxation time of the electroluminescence ≤ 2 μsec, which is 2-3 orders less than the corresponding times for luminophors based on ZnS. The electroluminescence spectrum and the dependence of brightness on the applied field were measured. V. A. Chapnin.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

1/2 036 UNCLASSIFIED PROCESSING DATE--13NOV70

TITLE--CHROMIUM PHOSPHATE HEXAHYDRATE DEHYDRATION PRODUCTS -U-

AUTHOR-(04)-LAVROV, A.V., MEDVEDEV, A.A., CHUDINOVA, N.N., TANANAYEV, I.V.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(10), 503-10

DATE PUBLISHED-------70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--PHASE ANALYSIS, DEHYDRATION, CHROMIUM COMPOUND, PHOSPHATE, PAPER CHROMATOGRAPHY, IR SPECTRUM, X RAY ANALYSIS, THERMAL EFFECT

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1994/1887 STEP NO--UR/0363/70/006/003/0503/0510

CIRC ACCESSION NO--AP0115706

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

2/2 036 UNCLASSIFIED PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0115706

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THERMAL DEHYDRATION OF CRPO SUB4.6H SUB2 O WAS STUDIED BY PAPER CHROMATOG., IR SPECTROSCOPY, AND X RAY RAY PHASE ANAL. AT SIMILIAR TO 300DEGREES AN AMORPHOUS PRODUCT FORMS WHICH CONTAINS PYROPHOSPHATE IONS (TOGETHER WITH THE ORTHOPHOSPHATE), WHICH AT 1000DEGREES CHANGES TO BETA CRPO SUB4. AT 1500DEGREES THE BETA PHASE CHANGES INTO AN ALPHA PHASE, WHICH CAN CONSIDERED AS THE CR OXYPYROPHOSPHATE. FACILITY: INST. OBSHCH. NEORG. KHIM. IM. KURNAKOVA, MOSCOW, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

1/2 034 UNCLASSIFIED PROCESSING DATE--27NOV70

TITLE--DEFECTS OF ZNS I CRYSTALS AND THEIR ELECTRON PARAMAGNETIC RESONANCE SPECTRUM -U-

AUTHOR-(02)-LAVROV, A.V., ARKHANGELSKIY, G.YE.

COUNTRY OF INFO--USSR

SOURCE--ZH. FIZ. KHIM. 1970, 44(2), 297-301

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--EPR SPECTRUM, CRYSTAL DEFECT, ZINC SULFIDE, EQUILIBRIUM CONSTANT, CRYSTAL GROWTH, ION DISTRIBUTION, UV IRRADIATION, REACTION KINETICS

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1418 STEP NO--UR/0076/70/044/002/0297/0301

CIRC ACCESSION NO--AP0135092 UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

2/2 034 UNCLASSIFIED PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0135092

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE FORMATION OF DEFECTS IN ZNS I SINGLE CRYSTALS GROWN BY THE GAS TRANSPORT METHOD (R. NITSCHE, 1960) WAS STUDIED BY CALCG. EQUIL. CONSTS. OF THE POSSIBLE REACTIONS OCCURRING DURING THE CRYSTAL GROWTH, BY ANALYZING THE KINETICS OF THE FORMATION OF S VACANCIES, AND BY MEASURING AND ANALYZING EPR SPECTRA OF ZNS I CRYSTALS AT ROOM TEMP. AND AT 77DEGREE$K AND 9560 MHZ. IN DARK AND AFTER IRRADIATION WITH UV RADIATION (LAMBDA EQUALS 365 NM). THE FORMATION OF VACANCIES DURING THE CRYSTAL GROWTH LEADS TO AN INCREASE IN ZN CONCN. THE PARAMAGNETIC ZN PRIME POSITIVE IONS LOCATED BETWEEN THE LATTICE POINTS ARE RESPONSIBLE FOR THE 0850. EPR SIGNALS (G EQUALS 1.9996) IN THE IRRADIATED CRYSTALS. THE INTENSITY OF THE EPR SPECTRA OF ZNS I CRYSTALS DECREASES WITH INCREASING SUPERSATN. DURING CRYSTAL GROWTH.

FACILITY: FIZ. INST. IM. LEBEDEVA, MOSCOW, USSR.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

UDC 612.014.481/.482

USSR

LAVROV, B. A., FILIPPOV, Yu. M., and YANOVSKAYA, B. I.

"Comparative Study of the Biological Effect of Different Kinds of Radiation -- 600 Mev Protons, X- and Gamma Rays"

Moscow, Byulleten' Eksperimental'noy Biologii i Meditsiny, No 10, 1971, pp 47-49

Abstract: Changes in the weight of rat spleen and gonads and in the ascorbic acid content of these organs and bone marrow were traced after irradiation of the animals with equal absorbed doses of X-rays and protons (400 rads) and gamma rays and protons (600 rads). X-rays and protons caused similar changes in the above indexes, but X-irradiation produced deeper and more stable disturbances in the hematopoietic tissues. Both types of irradiation caused similar changes in the weight of the gonads and their ascorbic acid content. Gamma rays induced sharper decreases in the weight of the spleen and ascorbic acid content of the spleen and bone marrow than did protons. However, reversal of these impairments started sooner after proton irradiation, suggesting that the RBE of protons with respect to the spleen and bone marrow is less than that of gamma rays. The effects of equal doses of gamma rays and protons on the gonads were virtually identical.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

UDC 539.385

USSR

LAVROV, B. A., MEKHEDA, V. A.

"Comparative Evaluation of Fatigue Strength Under Random and Programmed Loads"

Tr. Kuybyshev. aviats. in-t (Works of Kuybyshev Aviation Institute), 1971, No. 48, pp 231-245 (from RZh-Mekhanika, No 3, Mar 72, Abstract No 3V1906)

Translation: Various methods for constructing a repetition curve necessary for the formation of block programs for fatigue tests are discussed. Program tests of samples, with a hole, made of 30KhGSA steel and D16AT alloy are given for which three types of blocks constructed on the basis of maximum peak values of the particular achievement, in terms of the extrema (after substituting the sign of the lead) and on the basis of scale were applied. The results of program tests are compared with the results of tests under a random load on the basis of an achievement covered earlier. It is shown that block loading is a more harmful (in terms of breakdown) form of testing than a random test, so that the first two types of blocks give results that are little different. The program constructed on the basis of dimensions is called unsuitable for the reproduction of operational loading. 10 ref. S. V. Petinov.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC 532.542

KOGAY, G. N., LAVROV, B. Ye.

"Experimental Study of Hydraulic Resistance of Models of Various Types of Venturi Tubes"

Probl. Teploenerg. i Prikl. Teplofiz. Vyp. 8 [Problems of Heat Engineering and Applied Heat Physics, No 8 -- Collection of Works], Alma-Ata, Nauka Press, 1972, pp 131-136, (Translated from Referativnyy Zhurnal, Mekhanika, No 11, 1972, Abstract No 11 B518 by the author's).

Translation: Results are presented from a comparative experimental study of the hydraulic resistance of various Venturi tube models with various geometric relationships and shapes as a function of mode parameters. The characteristics produced can be used to evaluate structural and arrangement versions for reconstruction of wet ash-trapping systems at thermal electric power plants. 6 Biblio. Refs.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC 621.394.423

SELEZNEV, G. B., LAVROV, G. I.

"Discrete Automatic Carrier Frequency Tuning"

Moscow, Elektrosvyaz', No 7, 1970, pp 39-42

Abstract: This article discusses two basic methods for the formation of synchronous frequency oscillations in discrete signal transmission equipment from the information signal through the use of the latter's spectral characteristics. The first is the so-called resonance-phase method, and the device which executes it is known as the resonance synchronizer. In this method, the synchronous frequency oscillations are detected by a narrow-band filter from the information signal. In the second method, special correction devices for automatic phase and frequency tuning of the oscillator without direct effect on its parameters are used in the formation of the synchronous frequencies. This paper proposes a method of phase and frequency control of intermediate frequency oscillations by which the difficulties involved in applying the two systems can be avoided. A block diagram of the proposed system is given and its operation detailed. The authors express their gratitude to A. Yu. Lev for his criticism of the manuscript.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

UDC: 681.14

USSR

LAVROV, G. N., Engineer, PETUKH, A. M., Engineer

"An Averaging Follow-up System for Digital Frequency Meters"

Moscow, Pribory i Sistemy Upravleniya, No 1, Jan 72, pp 39-40

Abstract: The paper gives a block diagram of a follow-up device for computing the average running value of a periodically changing parameter in accordance with the formula

$$x_{n+1} = \frac{\sum_{i=1}^{n} a_i + a_{n+1}}{n+1} = \frac{x_n n + a_{n+1}}{n+1} = x_n + \frac{a_{n+1} - x_n}{n+1}$$

where x_n is the running average value of the parameter after n measurements, a_i is the "instantaneous" value of the parameter being measured, n is the number of measurements of the "instantaneous" values since the beginning of the averaging period, x_{n+1} is the average value after n + 1 measurements, a_{n+1} is the "instantaneous" value at the (n + 1)-th measurement.

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LAVROV, G. N. et al., Pribory i Sistemy Upravleniya, No 1, Jan 72, pp 39-40

The operating principle of the device is explained. An averaging follow-up frequency meter and an averaging follow-up analog-digital converter utilizing the described averaging device have been developed at the L'vov "Order of Lenin" Polytechnical Institute. One figure.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

AA0047075 UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

241537 MEASUREMENT OF PHASE SHIFT

based on the transposition of phase into a time interval. The equipment consists of incoming block (1), integrating amplifier (2), encoder of potential into frequency (3) and counter (4). One signal is converted into impulses of a duration equal to the distance between null points and the second signal into impulses of a duration equal the cycle time, of the tested signal. After passing through block (3) the phase shift is converted into a series of pulses passing into counter (4).

15.3.68 as 1225003/18-10. G.N.LAVROV & V.V.KRAVTSOV. LVOV POLYTECHNIC. (8.9.69) Bul 14/18.4.69. Class 21a. Int.Cl.G 01r.

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APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5"

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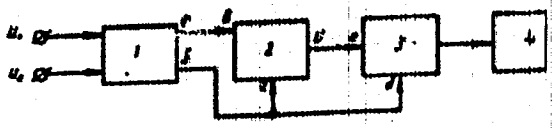
L'vovskiy Ordena Lenina Politekhnicheskiy Institut



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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC 621.357.7:669.236(088.8)

BELOV, S. F., GAMOCHKINA, V. A., LAVROV, I. I., SINITSYN, N. M.

"Method of Electrochemical Deposition of Ruthenium"

USSR Author's Certificate No 316752, filed 24 Mar 70, published 22 Dec 71 (From RZh-Khimiya, No 12, Jun 72, Abstract No 12L315P)

Translation: A procedure is patented for electrochemical deposition of Ru from an electrolyte based on sulfaminol and the complex salt of ruthenium. The procedure is distinguished by the fact that in order to obtain a uniform fine crystalline film, ammonium nitrosopentachlororuthenate is introduced as the complex Ru salt, and the process takes place at 20-70°, D_c 0.5-10 amps/dm^2. The electrolyte contains the following (in grams/liter): sulfaminol 40-50, ammonium nitrosopentachlororuthenate (on the metal) 0.5-4.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC: 624.131.43+539.21.084-492.3

LAVROV, I. M.

"Laws of Vibrations of Earthen Dams in the Case of Earthquakes, Explosions and Microseisms"

V sb. Seysmostoykost' zdaniy i sooruzh. (Seismic Stability of Buildings and Structures--collection of works), Tashkent, 1970, pp 258-265 (From Rzh-Mekhanika, No 9, Sep 70, Abstract No 9V594)

Translation: It is shown that the natural oscillations which develop when seismic waves propagate within the structure must be considered when studying seismic action on earthen dams. A layer-block model is proposed for the foundation-dam system in which the mass of the dam is divided into separate blocks with parallel and sloping faces. The seismic action is determined by the resonance vibrations in the blocks, the greatest effect being caused by transverse waves. The proposed model is used as a basis for analysis of the wave pattern in the dam with regard to the interaction of individual blocks. In conclusion, some recommendations are given on design measures for reducing the seismic effect on earthen dams. V. M. Shamin.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

Acc. Nr: AP0036530 Ref. Code: UR 0069

PRIMARY SOURCE: Kolloidnyy Zhurnal, 1970, Vol 32, Nr 1, pp 63-66

BEHAVIOR OF AQUEOUS SUSPENSIONS OF POLYACRYLONITRILE IN ALTERNATING ELECTRIC FIELD

Kovylov, A. Ye.; Lavrov, I. S.

Summary

The optical density of aqueous suspensions of polyacrylonitrile has been found to change in an alternating low frequency electric field. This change is explained by the oriented aggregation of polyacrylonitrile particles along the lines of force due to their polarization interaction caused by the ionic double layer polarization.

D.A.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

1/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--ON THE ZETA POTENTIAL OF PARTICLES IN MULTICOMPONENT SYSTEMS -U-

AUTHOR-(03)-BIBIK, YE.YE., SOKOLOVA, YE.A., LAVROV, I.S.

COUNTRY OF INFO--USSR

SOURCE--KOLLOIDNYY ZHURNAL, 1970, VOL 32, NR 2, PP 301-303

DATE PUBLISHED--------70

SUBJECT AREAS--PHYSICS, CHEMISTRY

TOPIC TAGS--BARIUM FERRITE, IRON OXIDE, ADSORPTION, COLLOID, CHEMICAL STABILITY

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1655 STEP NO--UR/0069/70/032/002/0301/0303

CIRC ACCESSION NO--AP0112649

UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5"

"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

2/2 018 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0112649

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ZETA POTENTIAL OF THE DISPERSED PHASE HAS BEEN MEASURED IN A SUSPENSION CONTAINING LARGE (10 PRIME NEGATIVE5 CM) BARIUM PARTICLES WITH A LOW ZETA POTENTIAL AND SMALL (10 PRIME NEGATIVE6 CM) FE SUB3 O SUB4 PARTICLES WITH A HIGH (POSITIVE 28 MV) ZETA POTENTIAL. ADSURPTION OF SMALL PARTICLES BY LARGE ONES IS OBSERVED AS WELL AS INCREASE IN STABILITY AND ZETA POTENTIAL OF LARGE PARTICLES. THE RELATIONSHIP BETWEEN THE AMOUNT OF ADSORBED PARTICLES AND THE ZETA POTENTIAL OF LARGE PARTICLES POINTS TO A DISCRETE LOCATION OF THE CHARGE ON THE SURFACE OF LARGE PARTICLES.

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USSR UDC: 621.372.413(088.8)

BEL'SKIY, O. A., GLAZKOV, G. N., ZHMUD', A. M., ZHULKOVSKIY, A. M., LAVROV, L. N.

"A Coaxial Circuit"

USSR Author's Certificate No 259201, filed 8 Jul 68, published 28 Apr 70 (from RZh-Radiotekhnika, No 2, Feb 71, Abstract No 2B211 P)

Translation: The Author's Certificate introduces a coaxial circuit which contains a lumped capacitance in the form of a hollow diaphragm with rigid and flexible walls located on the inner conductor at the first node of the voltage standing wave. To provide continuous tuning of the circuit, the rigid wall is fastened to a section of the inner conductor which passes through the shorted wall of the circuit and is movable in the axial direction, while the flexible wall of diaphragm type faces the open-circuit end of the tank and is fastened to the stationary section of the inner conductor.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC 621.396.669

BABANOV, Yu. N., MANUKYAN, S. G., LAVROV, M. A., Gor'kiy State University imeni N. I. Lobachevskiy

"A Device for Suppressing Regular Interference in Reception of Wide-Band Frequency-Modulated Signals"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, No 15, May 71, Author's Certificate No 302836, Division H, filed 4 Jul 69, published 28 Apr 71, p 203

Translation: This Author's Certificate introduces a device for suppressing regular interference in reception of wide-band frequency-modulated signals. The device contains two parallel channels equipped with filters and connected to a common load. As a distinguishing feature of the patent, the device is designed to provide reception without signal distortion when several interferences act simultaneously on the input. The channel filters are signal-tracking filters which are detuned with respect to the resonance frequency and relative to one another by an amount which is constant in time and which is several times the bandwidth of the active spectrum of the useful signal, and the filter passbands are selected to be identical and equal to the width of the active spectrum of the useful signal, a delay line being connected in one of the channels.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR UDC 530.145

BAGROV, V. G., BOZRIKOV, P. V., GITMAN, D. M., LAVROV, M. M.

"Electron in the Field of a Plane, Quantized, Monochromatic Electromagnetic Wave"

Tomsk, Izvestiya Vysshikh Uchebnykh Zavedeniy -- Fizika, No 8, 1973, pp 55-58

Abstract: The exact solution of the Dirac equation was obtained for an electron moving in a field of a quantized, monochromatic, plane electromagnetic wave of arbitrary polarization. The investigation of the arbitrary polarization of the wave leads to nontrivial physical consequences. The solution was found by the method of canonical transformation of the generation and destruction operators proposed by Bogolyubov and Tyablikov [ZhETF, No 19, 256, 1949]. In the special case of linear polarization the results obtained in this article are identical with the results of I. Berson [ZhETF, No 56, 1627, 1969], who demonstrated that the problem of movement of an electron in a quantized wave field can be solved exactly if it is restricted to the case of a monochromatic, linearly polarized wave. Volkov's solution [D. M. Volkov, Zs. Phys., Vol 94, 250, 1935] can be obtained from the indicated solution by determining the coherent state and subsequent transition to the limit as $V \to \infty$ (V is the normalization volume).

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USSR

YEL'CHANINOV, V. D., LAVROV, M. T., OBUKHOV, N. YA., SHMAKOV, V. A.

"Pneumatic Motor"

USSR Author's Certificate No 383861 (from Otkrytiya, Izobretaniya, Promyshlennyye obraztsy, Tovarnyye znaki (Discoveries, Inventions, Industrial Models, Trademarks), No 24, 1973, page 90)

Translation: This pneumatic motor which contains inside coupling gears with satellites and a reversible disc distributor with collectors in it for supply and discharge of the working medium is distinguished by the fact that in order to increase the efficiency and decrease the size, the distributor is located at the butts of the gears, and the collectors are arranged concentrically with respect to the housing axis and are coupled to the spaces between the teeth by the air distribution holes.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

YEL'CHANINOV, V. D., LAVROV, M. T., OBUKHOV, N. YA., SHMAKOV, V. A.

"Pneumatic Motor"

USSR Author's Certificate No 383862 (from Otkrytiya, Izobreteniya, Promyshlennyye obraztsy, Tovarnyye znaki (Discoveries, Inventions, Industrial Models, Trademarks), No 24, 1973, page 90)

Translation: This is a pneumatic motor in accordance with USSR Author's Certificate No 182442 distinguished by the fact that in order to reduce the run-down time and exclude autocranking of the shaft when the supply of working medium is stopped the halfcoupling of a ball locking clutch is fitted rigidly to the shaft, the second halfcoupling of which is spring-loaded and made to move with the possibility of axial displacements and between the cover and the housing a control cavity is formed with a diaphragm in it which contacts the sliding halfcoupling at the central point.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

LAVROV M. T.

AA0052654 UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General, Derwent, /- 70)

241851 SHAFT AND SEAL is reliable and provides a tight seal. It consists of a fixed chromium silicon steel ring 1, encased (3) rotation carbon ring 2 and an elastic gland 4 held on the shaft 5 by a sleeve 6. Crimped spring 7 fitted on the sleeve pushes the rotating clamp 8 and gland 4. The gland section represents a ring, neck 9, radiused portion 10 which projects by 0.3 mm in front of the ring face and a cylindrical part 11. During the assembly, the air is forced out of the space 12 and the gland is sucked towards the ring 2.

9.6.67. as 1163033/25-27, CHUGAEV, N.G. et al. (2.9.69) Bul. 14/18.4.69. Class 47c, Int. Cl. F 06d.

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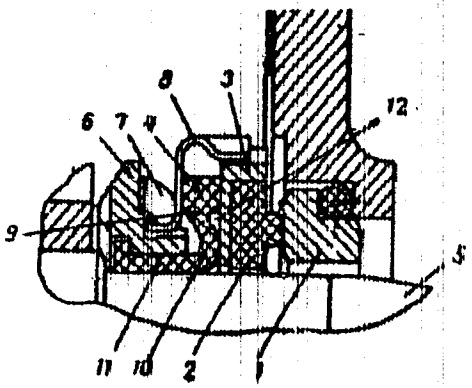
"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

AA0052654

Klimov, L. Ya.; Obukhov, N. Ya.; Lavrov, M. T.; Antipenko, I. N.; Severtsev, S. A.



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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

UDC 669.71.018.9.4

URAL'SKIY, M. P., and LAVROV, N. I.

"Development of Standard Specimens for Adjusting Apparatus Sensitivity Simultaneously With Immersion Checking of Round Ingots on Automated 'Splav (Alloy)-1' Device"

Tekhnol. legkikh splavov. Nauchno-tekhn. byul VILSa (Technology of Light Alloys. Scientific and Technical Bulletin of All-Union Institute of Light Alloys), 1970, No 3, pp 74-78 (from RZh-Metallurgiya, No 12, Dec 70, Abstract No 12 G235 from the summary)

Translation: The authors consider the factors affecting the sensitivity of the apparatus for ultrasonic defectoscopy. Recommendations are given regarding the correction, simultaneously with the adjustment of apparatus sensitivity by reference to standard specimens with a flat surface, of the input of ultrasonic vibrations for checking ingots made of aluminum-base alloys. Two illustrations. One table.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

LAVROV, N. V.; LEBEDEV, P. D.; et al (Moscow Power Engineering Institute)

"Heat Transfer in a Closed Convective Thermosiphon with an Insert"

Moscow, Teplofizika Vysokikh Temperatur; March-April, 1972; pp 412-5

ABSTRACT: The authors present the results of a study of the characteristics of closed convective thermosiphons with inserts operating with liquids having Prandtl numbers from 0.004 to 1400, in a temperature range from 30 to 430°C, and heat fluxes from 250 to 50,000 w/m^2 at inclination angles of 0 to 180°. The corresponding generalized relationships are obtained for the cases $t = const$ and $q = const$, reflecting the effect on heat transfer of the geometry of the thermosiphons, thermophysical properties of the intermediate coolants, and the mode parameters of the process (t is the average temperature of the wall in the areas of heating and cooling of the thermosiphon, °C; q is the heat flux from the wall to the intermediate coolant in the area of heating of the thermosiphon, w/m^2).

The article includes 3 equations, 5 figures, and one table. There are 5 bibliographic references.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

UDC 614.841.12

USSR

SMELKOV, G. I., POPOV, B. G., and LAVROV, N. V., Academician of the Uzbek SSR Academy of Sciences

"Mechanism of Spark Ignition of Aerosols"

Moscow, Doklady Akademii Nauk SSSR, Vol 196, No 4, 1971, pp 876-877

Abstract: The study of the process of ignition of two-phase systems by spark discharges is complicated by the absence of a clear explanation of the mechanism of development of the spark discharge channel. This paper contains a study of the process of ignition of a polystyrene aerosol with a fractional composition of 0-75 μ by condensed spark discharges. The study was made on high-speed movie shots taken by the SKS-1M camera. Sample film strips are presented.

The described method of high-speed photography permitted isolation and estimation (with respect to duration) of three stages in the process of spark ignition and flame development in aerosols: reaction in the volume of the mixture, the frontal flame propagation phase and the turbulent combustion phase. The results indicate the similarity of the nature of

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

USSR

SMELKOV, G. I., et al, Doklady Akademii Nauk SSSR, Vol 196, No 4, 1971, pp 876-877

development of the flame nucleous with a spark ignition initiator and in dust-air mixtures just as in homogeneous gas and air media.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

1/2 . 012 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--ABSORPTION DURING THE DRYING OF NATURAL GAS -U-

AUTHOR-(03)-SABIROV, SH.M., LAVROV, N.V., YATSYUK, P.YE.

COUNTRY OF INFO--USSR

SOURCE--GAZOV. PROM. 1970, 15(2), 43-5

DATE PUBLISHED--------70

SUBJECT AREAS--CHEMISTRY, MATERIALS

TOPIC TAGS--NATURAL GAS, ADSORPTION, ETHYLENE GLYCOL, DEHYDRATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1998/2043 STEP NO--UR/0492/70/015/002/0043/0045

CIRC ACCESSION NO--AP0122272
UNCLASSIFIED

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

2/2 012 UNCLASSIFIED PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0122272

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A 6 TRAY ABSORBER OF 2.4,4 DIAM., USING 90-9.5PERCENT DIETHYLENE GLYCOL, WAS OPERATED AT 150,000, 170,000, AND 200,000 M PRIME3 -HR, AND AN EMPIRICAL EQUATION DERIVED FOR DETN. OF A COEFF. OF MASS TRANSFER. EQUATIONS WERE ALSO DEVELOPED FOR THE REQUIRED NO. OF TRAYS AND THE WATER CONTENT OF THE GLYCOL TO ACHIEVE A DESIRED LEVEL OF GAS DEHYDRATION.

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"APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5

1/2 030 UNCLASSIFIED PROCESSING DATE--11DEC70
TITLE--CHAIN REACTION IN THE COMBUSTION OF CARBON -U-

AUTHOR--LAVROV, N.V.

COUNTRY OF INFO--USSR

SOURCE--KHIM. TVERD. TOPL. 1970, (3), 54-60

DATE PUBLISHED-------70

SUBJECT AREAS--PROPULSION AND FUELS

TOPIC TAGS--CHEMICAL REACTION MECHANISM, CARBON, COMBUSTION PRODUCT, OXYGEN, WATER, CARBON MONOXIDE, CARBON DIOXIDE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY FICHE NO----FD70/005060/COL STEP NO--UR/0467/70/000/003/0054/0060

CIRC ACCESSION NO--AP0144342
UNCLASSIFIED

APPROVED FOR RELEASE: 08/09/2001 CIA-RDP86-00513R002201720011-5"